UNITED STATES PATENT AND TRADEMARK OFFICE

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Patent Legal Staff		HUYNH, THU V
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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	09/825,453	SIMON ET AL.
	Examiner	Art Unit	
	Thu V. Huynh	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2006*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-7,9-11,13-19,22,24-27,29-31 and 33-40* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-7, 9-11, 13-19, 22, 24-27, 29-31, 33-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to communications: RCE and amendment filed on 12/18/06 to

application file on 04/03/01 which has CIP filed on 04/27/00.

2.   Claims 1, 16, 33-38 are currently amended.

3.   Claims 1, 4-7, 9-11, 13-19, 22, 24-27, 29-31, 33-40 are pending in the case. Claims 1,

16, and 36-38 are independent claims.

4.   The objections of claims 16, 30-31, 33-35 and 37 in the previous office action because of

the minor informalities have been withdrawn as necessitated by the amendment.

5.   The rejections of claims 1, 4-7, 9-11, 13-19, 22, 24-27, 29-31, 33-40 under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and

distinctly claim the subject matter which applicant regards as the invention in the

previous office action have been withdrawn in view of the amendment.

Claim Objections

6.   **Claims 37 are objected to because of the following informalities:**

Regarding independent claim 37, the use of "none of **being** said plurality" has

typographical error. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
subject matter which the applicant regards as his invention.

8.   **Claims 1, 4-7, 9-11, 13-19, 22, 24-27, 29-31, 33-40 are rejected under 35 U.S.C. 112,**

second paragraph, as being indefinite for failing to particularly point out and distinctly

claim the subject matter which applicant regards as the invention.

Regarding independent claims 16, this claim recites the phrase "providing at least one

predefined location in **said background ...**". There is insufficient antecedent basis for this

limitation in the claim, since only "background image" is mentioned before.

Regarding claims 40, which is dependent on claim 16, this claim recites the phrase

"wherein said image placeholder allows viewing ...". There is insufficient antecedent basis for

this limitation in the claim, since no "image placeholder" is mentioned before.

Dependent claims 17-19, 22, 24-27, 29-31, 33-35, 40 are rejected for fully incorporating the

dependencies of their base.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
patent by another filed in the United States before the invention by the applicant for patent, except that an
international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
subsection of an application filed in the United States only if the international application designated the United
States and was published under Article 21(2) of such treaty in the English language.

8.   **Claim 37 remains rejected under 35 U.S.C. 102(e) as being anticipated by King et**

al., US 5,956,737, patented 09/1999.

Regarding independent claim 37, King teaches the steps of:

- providing a plurality of digital images (King, col.3, lines 31-51; col.4, lines 34-41, 45-50; col.21, line 60 – col.23, line 20; col.35, lines 8-25; providing images, such as "fish logo", "rods" and "nets" images which are digital images, since King's method is performed on a computer);

- providing at least one predefined location defining an are in which none of said plurality of digital images may be placed (King, figures 8-11; providing at least one predefined location for fill in text, not for any of the images);

- selecting a number of said images and said at least one predefined location for placement on said predetermined page format (King, col.18, lines 15-56; selecting "fish logo" and "rods" images and at least one predefined location for text for placement on predetermined page format);

- grouping said plurality of images and said at least one predefined location into a plurality of different page layouts, each of said page layouts is capable of being printed and having white space between said plurality of digital image and said at least one predefined location wherein any one of said plurality of images is located in any position in said plurality of different page layouts (King, col.18, lines 15-56; grouping "fish logo" and "rods" images and said predefined location for text into different page layouts; each of page layouts capable to be a printed page and/or reviewed in print preview; one of the images may be located in any position in different page layouts based on user edits the content);

- analyzing each of said different page layouts in accordance with respect to the

amount of white space in each of said plurality of different page layouts and selecting

the page layout based on the amount of white space determined for each of said

plurality of page layouts (King, col.3, lines 19-21 and col.41, lines 7-10, the media

tree analysis proceeds until primitives a reached, wherein a white space scale factor in

determining how layouts are arrived at to choose the eventual layout).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

(b) This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10.   **Claims 1, 5, 14-15, 36, 38-39 remain rejected under 35 U.S.C. 103(a) as being**

unpatentable over <u>King</u> et al., US 5,956,737, patented 09/1999 in view of <u>Seaman</u>, US

6,415,306, filed 01/1999.

Regarding independent claim 1, King teaches a method of organizing a plurality of

digital images including at least one predefined location in predetermined page format (King,

col.2, lines 52-66; col.3, lines 31-51; col.21, line 60 – col.23, line 20 and corresponding figures),

comprising the steps of:

- grouping said plurality of images into a plurality of different page layouts wherein
  any one of said plurality of images may be located in any position in said plurality of
  different page layouts, each of said page layouts capable of being printed (King,
  col.3, lines 31-51; col.4, lines 34-41, 45-50; col.18, lines 15-56; col.21, line 60 –
  col.23, line 20; col.35, lines 8-25 and corresponding figures; grouping images, such
  as "fish logo", "rods" and "nets" images into different page layouts (figures 9-11)
  using a media tree of different page layouts, wherein any one of said images may be
  located in the top, bottom, right or left in said plurality of different page layouts, each
  of page layouts capable to be a printed page and/or reviewed in print preview);

- providing at least one predefined location in each of the plurality of different page
  layouts, said at least one predefined location defining an area in which none of said
  plurality of images may be placed, wherein each of said page layouts having white
  space between said at least one predefined location defining an area in which none of
  said plurality of images may be placed, wherein each of page layouts having white
  space between said at least one predefined location and said plurality of images
  (King, figures 8-10, col.17, line 56 – col.18, line 56; The user is able to drag and
  drop content, such as images into predefined areas 146, 150, 168, 174 and text into
  predefined areas 148, 152, 170, 176); and

- analyzing each of said different page layouts in accordance with the amount of white
  space in each of said plurality of different page layout and selecting the page layout
  based on the amount of white space determined for each of said plurality of different
  page layouts (King, col.3, lines 19-21 and col.40, line 20 – col.41, line 10, the media

tree analysis proceeds until primitives a reached, wherein a white space scale factor in

determining how layouts are arrived at to choose the eventual layout).

King does not explicitly disclose spatially balancing said white space between said

plurality of digital images and said at least one predefined location in accordance with the

amount of white space in each of said plurality of different page layouts.

Seaman teaches balancing white space between plurality placement item areas to create

aesthetically pleasing layouts; and each of page layout capable of being printed, (Seaman, col.3,

lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Seaman's equalization of white space into King's layout

to provide aesthetically pleasing layouts as Seaman disclosed in col.3, lines 29-31.

Regarding claim 5, which is dependent on claim 1, King teaches scaling the plurality of

digital images of said selected page layout by different amounts (King, col.41, lines 1-2 and

col.49, lines 48-58; scale factors may apply to particular design components. This implies

scaling the images of selected page layout by different amounts, wherein the images are digital

image since King's method is performed on a computer).

Regarding claim 14, which is dependent on claim 1, King does not explicitly teach

wherein said white space is determined vertically between adjacent images in said page layouts.

Seaman teaches white space is determined vertically between adjacent images in said

page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Seaman and King to have said white space be determined

vertically between adjacent images in said page layouts in order to organize the components for

the layout efficiently, since the combination would have provided aesthetically pleasing layouts

as Seaman disclosed.

Regarding claim 15, which is dependent on claim 1, King does not explicitly teach

wherein said white space is determined horizontally between adjacent images in said page

layouts.

Seaman teaches white space is determined horizontally between adjacent images in said

page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Seaman and King to have said white space be determined

horizontally between adjacent images in said page layouts in order to organize the components

for the layout efficiently, since the combination would have provided aesthetically pleasing

layouts as Seaman disclosed.

Regarding independent claim 38, claim 38 disclose a method similar to claim 1, King

also teaches the step of storing said selected page layout for later use (King, col.10, line 57 –

col.11, lines 48-52 and col.48, lines 7-11 and fig.37).   Therefore, claim 38 is rejected under the

same rationale.

Regarding dependent claim 39, which is dependent on claim 38, King teaches wherein said stored page layout is used with a second plurality set of images (King, col.10, line 57 – col.11, lines 48-52 and col.48, lines 7-11 and fig.37).

Regarding independent claim 36, claim 36 is for a computer software product performing method of claim 1, and is reject under the same rationale.

However, King does not explicitly disclose a system wherein a computer software product for laying out plurality of input image in predetermined format comprising a computer readable storage medium having a computer program.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have recognized that to performing the King's invention, a program/software must be stored in computer to execute such function.

11.   **Claims 4 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King in view of Seaman</u> as applied to claims 1 and 4 above, and further in view of <u>Ross</u> et al., US 6,026,417, filed 05/1997.**

Regarding claim 4, which is dependent on claim 1, King does not explicitly teaches wherein said analyzing said different page layouts comprises scoring each of said different page layouts.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a

situation wherein analyzing said different page layouts comprises scoring each of said different

page layout.

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Ross and King, since this would used Ross's scoring to

aid the decision process of King's invention.

Regarding claim 9, which is dependent on claim 4, King teaches the user of recursive

design tree to compare various layouts (King, abstract). Since recursion is internally represented

by iteration, this process necessarily involves analyzing of said different page layouts that

comprising an iteration of different page layouts and selecting the best page layout until the

criteria are best met. However, King does not explicitly teach a situation where no further

improvement in scoring is obtained.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page

layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a

situation wherein analyzing said different page layouts comprises scoring each of said different

page layout.

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Ross and King, since this would used Ross's scoring to

aid the decision process of King's invention.

Regarding claim 10, which is dependent on claim 9, King and Ross teach the limitations

of claim 9 as explained above. King teaches scaling individual images of the page layout

obtained after said iteration (King, col.19, lines 1-4; col.40, lines 52-54; col.41, lines 1-10;

col.46, lines 57-65; scale factors may be used to adjust components' fit in the layout process).

12.   **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King in</u>**

<u>view of Seaman</u> as applied to claim 1 above, and further in view of <u>Nakatake</u> et al., as

supplied by the Application in IDS filed on 04/03/2001.

   Regarding claim 6, which is dependent on claim 1, King does not explicitly teach

wherein the amount of white space is minimized by using stochastic algorithms.

   Nakatake's teachings are relevant to an analogous situation, in which chips are arranged

on an intergrated circuit. In this situation, Nakatake refers to using simulated annealing, which is

a type of stochastic algorithm, because it packs with good area efficiency and therefor minimizes

white space (Nakatake, page 487-488).

   It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Nakatake and King, since Nakatake's method of

simulated annealing to pack with good area efficiency, thereby resulting in a method wherein the

amount of white space is minimized by using stochastic algorithm.

13.   **Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King in view</u>**

<u>of Seaman</u> as applied to claim 1 above, and further in view of <u>Fukui</u> et al., US 5,742,837,

patented 1998.

Regarding claim 7, which is dependent on claim 1, King does not explicitly teach wherein said grouping said plurality of digital images includes placing said plurality of digital images in said different page layouts in a non-overlapping pattern.

Fukui teaches lists lack of overlapping as a criterion because it allows for an aesthetically pleasing layout (Fukui, col.7, lines 59-60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Fukui and King to include placing images in said different page layout in a non-overlapping pattern, since this would avoid overlap in order to arrive at a more aesthetically pleasing layout as Fukui disclosed.

14.   **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King in</u> <u>view of Seaman and further in view Ross</u> as applied to claim 9 above, and further in view of <u>Bottomly</u>, US 5,900,002, patented 1999.**

Regarding claim 11, which is dependent on claim 9, King and Ross teach the limitations of claim 9 as explained above. King does not explicitly disclose rotating said images a predetermined amount.

Bottomly teaches a process by which regions of the page are rotated 180 degrees to aid in orienting (Bottomly, col.4, lines 21-31).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Bottomly and King to rotating said images a predetermined amount, since Bottomly's method of rotating 180 degrees would have aided in orienting in page layout.

15.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King in view of Seaman</u> as applied to claim 1 above, and further in view of <u>Burn</u>, US 6,014,137, filed 02/1997.

Regarding claim 13, which is dependent on claim 9, King and Ross teaches the limitations of claim 9 as explained above. King does not explicitly teach positioning said plurality of digital images in said selected page layout so as to provide a desired border on said page.

Burns teaches the use of window borders in a kiosk authoring system that would require image arrangement in order to present the user with an aesthetically pleasing layout (Burns, col.3, line 59).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Burns' border and King, since this would have presented the user with an aesthetically pleasing layout.

16.   Claims 16, 25, 34-35 remain rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King</u> et al., US 5,956,737, patented 09/1999 and in view of <u>Koba</u>, US 6,222,947 B1, filed 02/1998 and <u>Seaman</u>, US 6,415,306, filed 01/1999.

Regarding independent claim 16, King teaches a method of finding a layout for composition, which may consist of images only. The method comprising the steps of:

-       grouping said plurality of digital images into a plurality of different page layouts

        wherein any one of said plurality of digital images is located in any position in said

plurality of different page layouts, each of page layouts capable of being printed (King, col.3, lines 31-51; col.4, lines 34-41, 45-50; col.18, lines 15-56; col.21, line 60 – col.23, line 20; col.35, lines 8-25 and corresponding figures; grouping images, such as "fish logo", "rods" and "nets" images into different page layouts (figures 9-11) using a media tree of different page layouts wherein one of the images may be located in any position in different page layouts, such as top, bottom, right, left based on user edits the content, each of page layouts capable to be a printed page and/or reviewed in print preview, wherein said plurality of images, such as both "Rods" and "Nets" are digital images since King's method is performed on a computer);

- providing at least one predefined location in said background in the plurality of different page layouts, said at least one predefined location defining an area in which none of plurality of digital images may be placed, wherein each of said page layouts having white space between said at least one predefined location and said plurality of digital images (King, figures 8-10, col.17, line 56 – col.18, line 56; The user is able to drag and drop content, such as images into predefined areas 146, 150, 168, 174 and text into predefined areas 148, 152, 170, 176); and

- analyzing each of said different page layouts in accordance with respect to the amount of white space in each of said plurality of different page layouts and selecting the page layout based on the amount of white space determined for each of said plurality of page layouts (King, col.3, lines 19-21 and col.41, lines 5-10, the media tree analysis proceeds until primitives a reached, wherein a white space scale factor in determining how layouts are arrived at to choose the eventual layout).

King does not explicitly disclose the steps of identifying an image to be used as a

background image; grouping said plurality of images into a plurality of different page layouts

including said background image; and spatially balancing said white space between said

plurality of digital images in accordance with the amount of white space in each of said plurality

of different page layouts.

Koba teaches method for laying out a plurality of images to plurality of pages includes

the steps of:

- identifying an image to be used as a background image (Koba, col.4, lines 41-44;

  col.5, lines 36-42);

- grouping said plurality of images into a plurality of different page layouts including a

  background image wherein any one of said plurality of images may be located in any

  position in said plurality of different page layouts, (Koba, figures 5A-5G; col.4, lines

  30-44; col.5, lines 36-42; and col.6, lines 7-45; grouping input images into different

  page layouts including a background image, wherein one of said images may be

  located in any position in the page layouts based on user's inputted information), each

  of said page layouts capable of being printed and having white space between said

  plurality of digital image and said predefined area (Koba, col.6, lines 43-54; col.7,

  lines 37-41; col.8, lines 12-14; and figures 5F; 6A-6B; printing the page layouts,

  wherein each of page layout has bank space (white space) between the images);

- analyzing each of said different page layouts in accordance with respect to the

  amount of white space in each of said plurality of different page layouts and selecting

  the page layout based on the amount of white space determined for each of said

plurality of page layouts (Koba, col.5, lines 36-56; col.6, lines 43-57; figure 4 and corresponding text; analyzing each different page layouts to indicate a "layout is poor in balance with an excessive blank space"; determining a better layout with white space for each of said plurality of page layouts).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Koba and King to provide such layout with background image, since this would have obtained an intuitively beautiful layout as Koba disclosed in col.5, lines 38-42.

Seaman teaches balancing white space between plurality of digital image and predefined area to create aesthetically pleasing layouts; and each of page layout capable of being printed, (Seaman, col.3, lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman's equalization of white space into Koba's layout to provide aesthetically pleasing layouts as Seaman disclosed in col.3, lines 29-31.

Regarding claim 25, which is dependent on claim 16, King teaches scaling the images of said selected page layout by different amounts (King, col.41, lines 1-10; col.46, lines 57-65; scale factors may apply to particular design components. This implies scaling the images of selected page layout by different amounts).

Regarding claim 34, which is dependent on claim 23, King does not explicitly teach wherein said white space is determined vertically between adjacent images in said page layouts.

Seaman teaches white space is determined vertically between adjacent images in said

page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Seaman and King to have said white space be determined

vertically between adjacent images in said page layouts in order to organize the components for

the layout efficiently, since the combination would have provided aesthetically pleasing layouts

as Seaman disclosed.

Regarding claim 35, which is dependent on claim 23, King teaches wherein said white

space is determined horizontally between adjacent images in said page layouts.

Seaman teaches white space is determined horizontally between adjacent images in said

page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Seaman and King to have said white space be determined

horizontally between adjacent images in said page layouts in order to organize the components

for the layout efficiently, since the combination would have provided aesthetically pleasing

layouts as Seaman disclosed.

17.   **Claims 17-19 remain rejected under 35 U.S.C. 103(a) as being unpatentable over**

King in view of Koba and Seaman as applied to claim 16 above and further in view of

Yamamoto et al., US 6,424,742 B2, filed 08/1998.

Regarding claim 17, which is dependent on claim 16, King and Koba teach the limitations of claim 16 as explained above. Koba does not explicitly disclose wherein said background image is displayed with at least one reduced characteristic.

Yamamoto teaches a background image is an image has very slow density (Yamamoto, col.10, lines 1-14).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Yamamoto into King and Koba to display background image with reduced characteristic, since this would have provide very slow density image as a background image.

Regarding claim 18, which is dependent on claim 17, King, Koba and Yamamoto teach the limitations of claim 17 as explained above. Yamamoto teaches reduced characteristic is color density. Yamamoto does not explicitly disclose wherein said at least one reduced characteristic is color saturation.

However, it would have been obvious to a person of ordinary skill in the art at the time at the invention was made to have modified Yamamoto to include color saturation as reduced characteristic of the background image, since it was well known in the art at the time the invention that saturation, lightness, intensity, contrast are attributes or characteristic of an image.

Regarding claim 19, which is dependent on claim 17, King, Koba and Yamamoto teach the limitations of claim 17 as explained above. King teaches identifying at least one image to be placed at a predetermined image location (King, col.18, lines 1-16).

18.   **Claims 24 and 29-30 remain rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King in view of Koba and Seaman</u> as applied to claim 16 above, and further in view of <u>Ross</u> et al., US 6,026,417, filed 05/1997.**

Regarding claim 24, which is dependent on claim 16, King does not explicitly teaches wherein said analyzing said different page layouts comprises scoring each of said different page layouts.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

Regarding claim 29, which is dependent on claim 16, King the user of recursive design tree to compare various layouts (King, abstract). Since recursion is internally represented by iteration, this process necessarily involves analyzing of said different page layouts that comprising a iteration of different page layouts and selecting the best page layout until the criteria are best met. However, King does not explicitly teach a situation where no further improvement in scoring is obtained.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page

layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a

situation wherein analyzing said different page layouts comprises scoring each of said different

page layout.

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Ross and King, since this would used Ross's scoring to

aid the decision process of King's invention.

Regarding claim 30, which is dependent on claim 29, King, Koba and Ross teach the

limitations of claim 29 as explained above. King teaches scaling individual images of the page

layout obtained after said iteration (King, col.19, lines 1-4; col.40, lines 52-54; col.41, lines 1-10;

col.46, lines 57-65; scale factors may be used to adjust components' fit in the layout process).

19.   **Claim 26 remains rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King</u>**

<u>in view of Koba and Seaman as</u> applied to claim 16 above, and further in view of <u>Nakatake</u>

et al., as supplied by the Application in IDS filed on 04/03/2001.

Regarding claim 26, which is dependent on claim 16, King does not explicitly teach

wherein the amount of white space is minimized by using stochastic algorithms.

Nakatake's teachings are relevant to an analogous situation, in which chips are arranged

on an intergrated circuit. In this situation, Nakatake refers to using simulated annealing, which is

a type of stochastic algorithm, because it packs with good area efficiency and therefor minimizes

white space (Nakatake, page 487-488).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Nakatake and King, since Nakatake's method of

simulated annealing to pack with good area efficiency, thereby resulting in a method wherein the

amount of white space is minimized by using stochastic algorithm.

20.   **Claim 27 remains rejected under 35 U.S.C. 103(a) as being unpatentable over King**

in view of Koba and Seaman as applied to claim 16 above, and further in view of Fukui et

al., US 5,742,837, patented 1998.

Regarding claim 27, which is dependent on claim 16, King does not explicitly teach

wherein said grouping of said plurality of digital images in said different page layouts is done in

a non-overlapping pattern.

Fukui teaches lists lack of overlapping as a criterion because it allows for an aesthetically

pleasing layout (Fukui, col.7, lines 59-60).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Fukui and King to include placing images in said different

page layout in a non-overlapping pattern, since this would avoid overlap in order to arrive at a

more aesthetically pleasing layout as Fukui disclosed.

21.   **Claim 31 remains rejected under 35 U.S.C. 103(a) as being unpatentable over King**

in view of Koba and Seaman and further in view of Ross as applied to claim 29 above, and

further in view of Bottomly, US 5,900,002, patented 1999.

Regarding claim 31, which is dependent on claim 29, King, Koba and Ross teach the limitations of claim 29 as explained above. King does not explicitly disclose rotating said images a predetermined amount.

Bottomly teaches a process by which regions of the page are rotated 180 degrees to aid in orienting (Bottomly, col.4, lines 21-31).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Bottomly and King to rotating said images a predetermined amount, since Bottomly's method of rotating 180 degrees would have aided in orienting in page layout.

22. **Claim 33 remains rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King in view of Koba and Seaman and further in view of Ross</u> as applied to claim 29 above, and further in view of <u>Burn</u>, US 6,014,137, filed 02/1997.**

Regarding claim 33, which is dependent on claim 29, King, Koba and Ross teaches the limitations of claim 29 as explained above. King does not explicitly teach positioning said images in said selected page layout so as to provide a desired border on said page.

Burns teaches the use of window borders in a kiosk authoring system that would require image arrangement in order to present the user with an aesthetically pleasing layout (Burns, col.3, line 59).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Burns' border and King, since this would have presented the user with an aesthetically pleasing layout.

23.   Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>King in view</u>

<u>of Koba and Seaman</u> as applied to claim 16 above, and further in view of <u>Bossut</u> et al., US

2001/0030653 A1, priority filed 04/1998 as provided in "Notice of References Cited" (PTO-

892 form) mailed on 07/06/04.

Regarding claim 40, which is dependent on claim 16, King does not explicitly teach

wherein said image placeholder allows viewing an area of interest in the background.

Bossut teaches image placeholder is correlated to an area of interest of said image

(Bossut, page 6, paragraph 118).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have modified Bossut into King to viewing a zone of interest of said

image background, since this would have allowed the user to identify interesting portion of any

images including background image as an placeholder image.

24.   Claims 1, 5, 14-15, 36, 38-39 is rejected under 35 U.S.C. 103(a) as being

unpatentable over <u>Koba</u>, US 6,222,947 B1, filed 02/1998, in view of <u>King</u> et al., US

5,956,737, patented 09/1999 and <u>Seaman</u>, US 6,415,306 B2, filed 01/1999.

Regarding independent claim 1, Koba teaches the steps of:

-   grouping said plurality of images into a plurality of different page layouts (Koba,

    figures 5A-5F; 6A-6B; col.5, lines 36-42; and col.6, lines 7-52; grouping a plurality

    input images (fig.5B) and at least one predefined location (fig.6A-6B) into a plurality

of page layouts based on user input parameters) wherein any one of said plurality of images is located in any position in said plurality of different page layouts (Koba, col.5, lines 36-56; col.6, lines 7-20; a particular image may be located in any position in plurality of different page layout based upon user inputs information), each of said page layouts capable of being printed (Koba, col.6, lines 20-54; col.7, lines 37-41; col.8, lines 12-14; and figures 5A-F; 6A-6B; printing the page layouts; each of page layout has bank space (white space) between the images and the predefined location; and wherein said plurality of images, such as images 2 and 3, are not placed in the placeholder of image 1 in fig.5F or one of place holder of figures 6A or 6B);

- providing at least one predefined location in each of the plurality of different page layouts, wherein each of said page layouts having white space between said at least one predefined location and said plurality of images (Koba, col.6, lines 20-54; col.7, lines 37-41; col.8, lines 12-14; and figures 5A-F; 6A-6B; providing predefined locations for plurality of images in each page layout, wherein each of page layout has bank space (white space) between the a predefined location and plurality of images);

- analyzing each of said different page layouts in accordance with the amount of white space in each of plurality of different page layouts and selecting the page layout based on the amount of white space determined for each of said plurality of different page layouts (Koba, col.5, lines 36-56; col.6, lines 43-57; figure 4 and corresponding text; analyzing each different page layouts to indicate a "layout is poor in balance with an excessive blank space"; determining a better layout with white space for each of said plurality of page layouts).

Koba does not explicitly disclose at least one predefined location defining an area in which none of said plurality of images may be placed and spatially balanced said white space between said plurality of digital image and said at least predefined location.

King teaches providing at least one predefined location in each of the plurality of different page layouts, said at least one predefined location defining an area in which none of said plurality of images may be placed, wherein each of said page layouts having white space between said at least one predefined location defining an area in which none of said plurality of images may be placed, wherein each of page layouts having white space between said at least one predefined location and said plurality of images (King, figures 8-10, col.17, line 56 – col.18, line 56; The user is able to drag and drop content, such as images into predefined areas 146, 150, 168, 174 and text into predefined areas 148, 152, 170, 176); and

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's teaching and Koba's teaching to provide predefined areas for text as well as images, since the combination would have provide areas for text/caption correspond with the plurality of images as King disclosed in col. 18, lines 4-5.

Seaman teaches balancing white space between plurality placement item areas to create aesthetically pleasing layouts; and each of page layout capable of being printed, (Seaman, col.3, lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman's equalization of white space into Koba's layout to provide aesthetically pleasing layouts as Seaman disclosed in col.3, lines 29-31 as well as

Koba's suggested, "an intuitively beautiful layout", "a neat layout" (Koba, col.5, liens 38; col.6,

lines 17-18).

Regarding claim 5, which is dependent on claim 1, Koba teaches scaling the plurality of

digital images of said selected page layout by different amounts (Koba, col.5, lines 36-40; col.7,

lines 37-41; adjusting the sizes of images).

Regarding claim 14, which is dependent on claim 1, Seaman teaches white space is

determined vertically between adjacent images in said page layout (Seaman, col.7, line 59 –

col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Seaman and Koba to have said white space be determined

vertically between adjacent images in said page layouts in order to organize the components for

the layout efficiently, since the combination would have provided aesthetically pleasing layouts

as Seaman disclosed.

Regarding claim 15, which is dependent on claim 1, Seaman teaches white space is

determined horizontally between adjacent images in said page layout (Seaman, col.7, line 59 –

col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Seaman and Koba to have said white space be determined

horizontally between adjacent images in said page layouts in order to organize the components

for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

Regarding independent claim 36, Koba teaches computer software product for laying out plurality of input image in predetermined format comprising a computer readable storage medium having a computer program wherein any one of said plurality of images may be located in any position in said plurality of different page layouts (Koba, col.3, lines 20-31 and col.11, lines 62-65) which when loaded into a computer cause the computer to perform the steps performing the method of claims 1, and is rejected under the same rationale.

Regarding independent claim 38, claim 38 disclose a method similar to claim 1, Koba also teaches the step of storing said selected page layout for later use (Koba, col.8, lines 1-9; storing satisfactory layout for subsequent layout). Therefore, claim 38 is rejected under the same rationale.

Regarding dependent claim 39, which is dependent on claim 38, King teaches wherein said stored page layout is used with a second plurality set of images (Koba, col.8, lines 1-9; storing satisfactory layout for subsequent layout).

25.   **Claims 4, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable Koba in view of King and Seaman and further in view of Ross et al., US 6,026,417, filed 05/1997.**

Regarding claim 4, which is dependent on claim 1, Koba does not explicitly teaches wherein said analyzing said different page layouts comprises scoring each of said different page layouts.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and Koba, since this would used Ross's scoring to aid the decision process of Koba's invention.

Regarding claim 9, which is dependent on claim 4, Koba does not explicitly disclose iteration of comparing sequentially two different page layouts and selecting the best page layout until little or no further improvement in scoring is obtained.

King teaches the user of recursive design tree to compare various layouts (King, abstract). Since recursion is internally represented by iteration, this process necessarily involves analyzing of said different page layouts that comprising a iteration of different page layouts and selecting the best page layout until the criteria are best met.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's iteration into Koba's analyzing layout process, since the combination would have helped to selecting the best page layout.

However, King does not explicitly teach a situation where no further improvement in scoring is obtained.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

Regarding claim 10, which is dependent on claim 9, King teaches scaling individual images of the page layout obtained after said iteration (King, col.19, lines 1-4; col.40, lines 52-54; col.41, lines 1-10; col.46, lines 57-65; scale factors may be used to adjust components' fit in the layout process).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's iteration into Koba's analyzing layout process, since the combination would have helped to selecting the best page layout.

26.   **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Koba in view of King and Seaman</u> as applied to claim 1 above, and further in view of <u>Nakatake</u> et al., as supplied by the Application in IDS filed on 04/03/2001.**

Regarding claim 6, which is dependent on claim 1, Koba does not explicitly teach wherein the amount of white space is minimized by using stochastic algorithms.

Nakatake's teachings are relevant to an analogous situation, in which chips are arranged on an intergrated circuit. In this situation, Nakatake refers to using simulated annealing, which is a type of stochastic algorithm, because it packs with good area efficiency and therefor minimizes white space (Nakatake, page 487-488).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Nakatake and Koba, since Nakatake's method of simulated annealing to pack with good area efficiency, thereby resulting in a method wherein the amount of white space is minimized by using stochastic algorithm.

27. **Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Koba in view of King and Seaman</u> as applied to claim 1 above, and further in view of <u>Fukui</u> et al., US 5,742,837, patented 1998.**

Regarding claim 7, which is dependent on claim 1, Koba does not explicitly teach wherein said grouping said plurality of digital images includes placing said plurality of digital images in said different page layouts in a non-overlapping pattern.

Fukui teaches lists lack of overlapping as a criterion because it allows for an aesthetically pleasing layout (Fukui, col.7, lines 59-60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Fukui and Koba to include placing images in said

different page layout in a non-overlapping pattern, since this would avoid overlap in order to

arrive at a more aesthetically pleasing layout as Fukui disclosed.

28.   **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Koba in</u>**

<u>view of King, Seaman and further in view Ross</u> as applied to claim 9 above, and further in

view of <u>Bottomly</u>, US 5,900,002, patented 1999.

   Regarding claim 11, which is dependent on claim 9, Koba does not explicitly disclose

rotating said images a predetermined amount.

   Bottomly teaches a process by which regions of the page are rotated 180 degrees to aid in

orienting (Bottomly, col.4, lines 21-31).

   It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Bottomly and Koba to rotating said images a

predetermined amount, since Bottomly's method of rotating 180 degrees would have aided in

orienting in page layout.

29.   **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Koba</u>**

<u>in view of King and Seaman</u> as applied to claim 1 above, and further in view of <u>Burn</u>, US

6,014,137, filed 02/1997.

   Regarding claim 13, which is dependent on claim 1, Koba does not explicitly teach

positioning said plurality of digital images in said selected page layout so as to provide a desired

border on said page.

Burns teaches the use of window borders in a kiosk authoring system that would require image arrangement in order to present the user with an aesthetically pleasing layout (Burns, col.3, line 59).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Burns' border and Koba, since this would have presented the user with an aesthetically pleasing layout.

30.   Claims 16, 25, 34-35 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Koba**, US 6,222,947 B1, filed 02/1998 in view of **King** et al., US 5,956,737, patented 09/1999 and **Seaman**, US 6,415,306, filed 01/1999.

Regarding independent claim 16, Koba teaches method for laying out a plurality of images to plurality of pages comprising the steps of:

-   identifying an image to be used as a background image (Koba, col.4, lines 41-44; col.5, lines 36-42);

-   grouping said plurality of digital images into a plurality of different page layouts including a background image (Koba, figures 5A-5G; col.4, lines 30-44; col.5, lines 36-42; and col.6, lines 21-45; grouping input images into different page layouts including a background image) wherein any one of said plurality of images is located in any position in said plurality of different page layouts (Koba, col.5, lines 36-56; col.6, lines 7-20; a particular image may be located in any position in plurality of different page layout based upon user inputs information), each of said page layouts is capable of being printed (Koba, col.6, lines 43-54; col.7, lines 37-41; col.8, lines 12-

14; and figures 5F; 6A-6B; printing the page layouts, wherein each of page layout

has bank space (white space) between the images);

- providing at least one predefined location in said background in the plurality of

different page layouts, said at least one predefined location defining an area in which

one of plurality of digital images may be placed, wherein each of said page layouts

having white space between said at least one predefined location and said plurality of

digital images (Koba, col.6, lines 20-54; col.7, lines 37-41; col.8, lines 12-14; and

figures 5A-F; 6A-6B; providing predefined locations for plurality of images in each

page layout, wherein each of page layout has bank space (white space) between the

predefined locations); and

- analyzing each of said different page layouts in accordance with respect to the

amount of white space in each of said plurality of different page layouts and selecting

the page layout based on the amount of white space determined for each of said

plurality of page layouts (Koba, col.5, lines 36-56; col.6, lines 43-57; figure 4 and

corresponding text; analyzing each different page layouts to indicate a "layout is poor

in balance with an excessive blank space"; determining a better layout with white

space for each of said plurality of page layouts).

Koba does not explicitly disclose at least one predefined location defining an area in

which one of plurality of digital images may be placed and spatially balanced said white space

between said plurality of digital images.

King teaches providing at least one predefined location in each of the plurality of

different page layouts, said at least one predefined location defining an area in which none of

said plurality of images may be placed, wherein each of said page layouts having white space

between said at least one predefined location defining an area in which none of said plurality of

images may be placed, wherein each of page layouts having white space between said at least

one predefined location and said plurality of images (King, figures 8-10, col.17, line 56 – col.18,

line 56; The user is able to drag and drop content, such as images into predefined areas 146, 150,

168, 174 and text into predefined areas 148, 152, 170, 176); and

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined King's teaching and Koba's teaching to provide a

placeholder being void of said plurality of images, since the combination would have provide

areas for text/caption correspond with the plurality of images as King disclosed in col. 18, lines

4-5.

Seaman teaches balancing white space between plurality of placement item areas to

create aesthetically pleasing layouts; and each of page layout capable of being printed (Seaman,

col.3, lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Seaman's equalization of white space into Koba's layout

to provide aesthetically pleasing layouts as Seaman disclosed in col.3, lines 29-31.

Regarding claim 25, which is dependent on claim 16, Koba teaches scaling the plurality

of digital images of said selected page layout by different amounts (Koba, col.5, lines 36-40;

col.7, lines 37-41; adjusting the sizes of images).

Regarding claim 34, which is dependent on claim 23, Koba does not explicitly teach wherein said white space is determined vertically between adjacent images in said page layouts.

Seaman teaches white space is determined vertically between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and Koba to have said white space be determined vertically between adjacent images in said page layouts in order to organize the components for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

Regarding claim 35, which is dependent on claim 23, Koba teaches wherein said white space is determined horizontally between adjacent images in said page layouts.

Seaman teaches white space is determined horizontally between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and Koba to have said white space be determined horizontally between adjacent images in said page layouts in order to organize the components for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

31.   **Claims 17-19 is rejected under 35 U.S.C. 103(a) as being unpatentable over**

Koba in view of King and Seaman as applied to claim 16 above and further in view of

Yamamoto et al., US 6,424,742 B2, filed 08/1998.

Regarding claim 17, which is dependent on claim 16, Koba does not explicitly disclose

wherein said background image is displayed with at least one reduced characteristic.

Yamamoto teaches a background image is an image has very slow density (Yamamoto,

col.10, lines 1-14).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Yamamoto into King and Koba to display background

image with reduced characteristic, since this would have provide very slow density image as a

background image.

Regarding claim 18, which is dependent on claim 17, Yamamoto teaches reduced

characteristic is color density. Yamamoto does not explicitly disclose wherein said at least one

reduced characteristic is color saturation.

However, it would have been obvious to a person of ordinary skill in the art at the time at

the invention was made to have modified Yamamoto to include color saturation as reduced

characteristic of the background image, since it was well known in the art at the time the

invention that saturation, lightness, intensity, contrast are attributes or characteristic of an image.

Regarding claim 19, which is dependent on claim 17, King, Koba and Yamamoto teach

the limitations of claim 17 as explained above. King teaches identifying at least one image to be

placed at a predetermined image location (King, col.18, lines 1-16).

32.   **Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Koba</u>**

<u>in view of King and Seaman</u> as applied to claim 16 above, and further in view of <u>Ross</u> et al.,

US 6,026,417, filed 05/1997.

Regarding claim 24, which is dependent on claim 16, Koba does not explicitly teaches

wherein said analyzing said different page layouts comprises scoring each of said different page

layouts.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page

layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a

situation wherein analyzing said different page layouts comprises scoring each of said different

page layout.

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have combined Ross and King, since this would used Ross's scoring to

aid the decision process of King's invention.

33.   **Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Koba</u>**

<u>in view of King and Seaman</u> as applied to claim 16 above, and further in view of <u>Nakatake</u>

et al., as supplied by the Application in IDS filed on 04/03/2001.

Regarding claim 26, which is dependent on claim 16, Koba does not explicitly teach

wherein the amount of white space is minimized by using stochastic algorithms.

Nakatake's teachings are relevant to an analogous situation, in which chips are arranged

on an intergrated circuit. In this situation, Nakatake refers to using simulated annealing, which is

a type of stochastic algorithm, because it packs with good area efficiency and therefor minimizes white space (Nakatake, page 487-488).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Nakatake and King, since Nakatake's method of simulated annealing to pack with good area efficiency, thereby resulting in a method wherein the amount of white space is minimized by using stochastic algorithm.

34.   **Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over**

Koba in view of King and Seaman as applied to claim 16 above, and further in view of

Fukui et al., US 5,742,837, patented 1998.

Regarding claim 27, which is dependent on claim 16, Koba does not explicitly teach wherein said grouping of said plurality of digital images in said different page layouts is done in a non-overlapping pattern.

Fukui teaches lists lack of overlapping as a criterion because it allows for an aesthetically pleasing layout (Fukui, col.7, lines 59-60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Fukui and King to include placing images in said different page layout in a non-overlapping pattern, since this would avoid overlap in order to arrive at a more aesthetically pleasing layout as Fukui disclosed.

35.   **Claims 29-30 is rejected under 35 U.S.C. 103(a) as being unpatentable over**

Koba in view of King and Seaman as applied to claim 16 above, and further in view **Ross** et al., US 6,026,417, filed 05/1997.

Regarding claim 29, which is dependent on claim 16, Koba does not explicitly disclose iteration of comparing sequentially two different page layouts and selecting the best page layout until little or no further improvement in scoring is obtained.

King teaches the user of recursive design tree to compare various layouts (King, abstract). Since recursion is internally represented by iteration, this process necessarily involves analyzing of said different page layouts that comprising a iteration of different page layouts and selecting the best page layout until the criteria are best met.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's iteration into Koba's analyzing layout process, since the combination would have helped to selecting the best page layout.

However, King does not explicitly teach a situation where no further improvement in scoring is obtained.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

Regarding claim 30, which is dependent on claim 29, King teaches scaling individual images of the page layout obtained after said iteration (King, col.19, lines 1-4; col.40, lines 52-54; col.41, lines 1-10; col.46, lines 57-65; scale factors may be used to adjust components' fit in the layout process).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's iteration into Koba's analyzing layout process, since the combination would have helped to selecting the best page layout.

36.   **Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Koba in view of King and Seaman and further in view of Ross</u> as applied to claim 29 above, and further in view of <u>Bottomly</u>, US 5,900,002, patented 1999.**

Regarding claim 31, which is dependent on claim 29, Koba does not explicitly disclose rotating said images a predetermined amount.

Bottomly teaches a process by which regions of the page are rotated 180 degrees to aid in orienting (Bottomly, col.4, lines 21-31).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Bottomly and King to rotating said images a predetermined amount, since Bottomly's method of rotating 180 degrees would have aided in orienting in page layout.

37.   **Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Koba</u>**

and in view of King and Seaman as applied to claim 16 above, and further in view of **Burn,** US 6,014,137, filed 02/1997.

Regarding claim 33, which is dependent on claim 16, Koba does not explicitly teach positioning said images in said selected page layout so as to provide a desired border on said page.

Burns teaches the use of window borders in a kiosk authoring system that would require image arrangement in order to present the user with an aesthetically pleasing layout (Burns, col.3, line 59).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Burns' border and King, since this would have presented the user with an aesthetically pleasing layout.

38.   **Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba, US 6,222,947 B1, filed 02/1998 in view of King et al., US 5,956,737, patented 09/1999**

Regarding independent claim 37, Koba teaches the steps of:

- providing a plurality of digital images (Koba, col.1, lines 6-8 and col.2, lines 4-51 input plurality of digital images to be laid out on a page);

- providing at least one predefined location defining an area in which one of said plurality of digital images may be placed (Koba, col.6, lines 7-20; providing at least one page layout including at least one layout position of an image);

- selecting a number of said images and said at least one predefined location for placement on said predetermined format (Koba, figures 5A-5; col.5, lines 36-42;

col.6, lines 21-45; and col.6, lines 7-20; selecting a number of said a plurality input

images and said predefined locations for placement on a page layout based on user

input parameters);

- grouping said plurality of images and said at least one predefined location into a

   plurality of different page layouts (Koba, figures 5A-5; col.5, lines 36-42; and col.6,

   lines 7-52; grouping a plurality input images and said predefined locations into a

   plurality of page layouts based on user input parameters), each of said page layouts

   capable of being printed and having white space between said plurality of digital

   images and said at least one predefined location (Koba, col.6, lines 43-54; col.7, lines

   37-41; col.8, lines 12-14; and figures 5F; 6A-6B; printing the page layouts and each

   of page layout has bank space (white space) between the images and the layout

   position of an image) wherein any one of said plurality of images may be located in

   any position in said plurality of different page layouts (Koba, col.5, lines 36-56; col.6,

   lines 7-20; a particular image may be located in any position in plurality of different

   page layout based upon user inputs information);

- analyzing each of said different page layouts in accordance with respect to the

   amount of white space in each of said plurality of different page layouts and selecting

   the page layout based on the amount of white space determined for each of said

   plurality of page layouts (Koba, col.5, lines 36-56; col.6, lines 43-57; figure 4 and

   corresponding text; analyzing each different page layouts to indicate a "layout is poor

   in balance with an excessive blank space"; determining a better layout with white

   space for each of said plurality of page layouts).

Koba does not explicitly disclose the predefined location being void of any image of said plurality of digital images and grouping said plurality of images and said predefined location being void of said plurality of digital images.

King teaches:

- providing at least one predefined location in each of the plurality of different page layouts, said at least one predefined location defining an area in which none of said plurality of images may be placed, wherein each of said page layouts having white space between said at least one predefined location and said plurality of images (King, figures 8-10, col.17, line 56 – col.18, line 56; The user is able to drag and drop content, such as images into predefined areas 146, 150, 168, 174 and text into predefined areas 148, 152, 170, 176); and

- grouping said plurality of images and said at least one predefined location into a plurality of different page layouts, each of said page layouts is capable of being printed and having white space between said plurality of digital image and said at least one predefined location wherein any one of said plurality of images is located in any position in said plurality of different page layouts (King, col.18, lines 15-56; grouping "fish logo" and "rods" images and said predefined location for text into different page layouts; each of page layouts capable to be a printed page and/or reviewed in print preview; one of the images may be located in any position in different page layouts based on user edits the content);

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's teaching and Koba's teaching to provide a

placeholder being void of said plurality of images, since the combination would have provide

areas for text/caption correspond with the plurality of images as King disclosed in col. 18, lines

4-5.

39.   **Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Koba</u>**

in view of <u>King and Seaman</u> as applied to claim 16 above, and further in view of <u>Bossut</u> et

al., US 2001/0030653 A1, priority filed 04/1998 as provided in "Notice of References Cited"

(PTO-892 form) mailed on 07/06/04.

Regarding claim 40, which is dependent on claim 16, Koba and King does not explicitly

teach wherein said image placeholder allows viewing an area of interest in the background.

Bossut teaches image placeholder is correlated to an area of interest of said image

(Bossut, page 6, paragraph 118).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to have modified Bossut into Koba and King to provide an zone of interest

of said image background, since this would have allowed the user to identify interesting portion

of any images including background image as an placeholder image.

Response to Arguments

40.   Applicant's arguments filed on 05/05/06 have been fully considered but they are not

persuasive.

Applicants argue that King does not "use white space as a criteria for determining

desirability of a page layout"; "providing of a predetermined area which defines an area in which

none of the plurality of images may be placed" (Remarks, page 13, paragraphs 2-3) and Seaman

does not teach analyzing each of the different page layouts and spatially balance the white space

between the plurality of digital images and the providing at least one predetermined locations in

which none of the image are placed" (Remarks, page 14, paragraph 1).

Examiner respectfully disagrees. King teaches recursive technique to attempt to fit

content onto a medium and King's fitting content into a media also based on many factors that

include white space scale factor (King, col.40, line 20 – col.41, line 10). Therefore, King's

teaching perfectly matches to the claimed language of claim 37. King specifically teaches

predefined locations/areas for text, such as 148, 152, 170, 176 areas (King, figures 8-9). Besides,

Seaman teaches balancing white space between plurality placement item areas to create

aesthetically pleasing layouts; and each of page layout capable of being printed, (Seaman, col.3,

lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12). Therefore, the

combination of King and Seaman teaches the claimed limitations of claims 1, 16, 36 and 38.
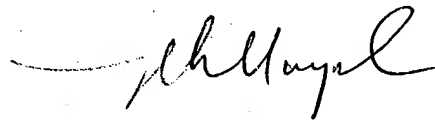
Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Thu V. Huynh whose telephone number is (571) 272-4126. The

examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Stephen S. Hong can be reached on (571) 272-4124. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thu V. Huynh
February 20, 2007